

**DEPARTMENT OF ENVIRONMENTAL QUALITY
PERMITTING and COMPLIANCE DIVISION
MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(MPDES)**

Fact Sheet/Statement of Basis

Permittee:	Montana Tunnels, Inc.
Permit No.:	MT 0028428
Receiving Water:	Unnamed Tributary to Spring Creek
Facility Information:	
Name	Montana Tunnels Mine
Location	6 Miles West of Jefferson City Montana, within Sections 8, 9, 16 and 17 of Township 7 North, Range 4 West
Facility Contact:	Mr. John Schaefer, Environmental Manager P.O. Box 176 Jefferson City, MT 59638 (406) 933-8314
Fee Information:	
Number of Outfalls	2 (for fee purposes)
Outfall – Type	001 – Mine Drainage and Storm Water 002 – Mine Drainage

I. Permit Status	3
II. Facility Information	3
A. Facility Description.....	3
B. Effluent Characteristics.....	4
C. Current Permit Limits and Compliance History	6
III. Rationale for Technology-Based Effluent Limits.....	6
IV. Rationale for Water Quality-Based Effluent Limits	7
A. Receiving Water.....	8
B. Proposed WQBEL	8
1. Applicable Standards	8
2. Proposed Limits	9
V. Final Effluent Limits.....	12
VI. Monitoring Requirements	14
A. Effluent Monitoring	14
B. Whole Effluent Toxicity (WET) Requirements.....	16
C. Compliance Schedule.....	16
VII. Nonsignificance Determination	17
VIII. Other Information	17
IX. Information Source	18
Attachment 1: Water Balance and Flow Line Diagram During Operations.....	19
Attachment 2: Water Quality Based Permit Limit Derivations.....	20
Attachment 3: Public Participation	26

I. Permit Status

MPDES permit number MT0028428 was first issued in 1987 to Centennial Minerals, Inc. The Montana Tunnels Mine facility has been operating since 1986. The permit was renewed and reissued to Montana Tunnels Mining, Inc. in 1992 and 1997. The current permit authorizes discharge of storm water and mine drainage from Outfall 001. No mixing zone has been granted.

The current permit expired on October 31, 2002. The department received the application for renewal of permit number MT0028428 on March 28, 2002. The application was determined to be complete on April 8, 2003 and the permit was administratively extended. The department received a request for modification of the permit on February 8, 2006 to include Outfall 002. The application was determined to be complete and effective on June 20, 2006.

The facility currently maintains Metal Mine Reclamation Act Operating Permit # 00113, and Montana Air Quality Permit # 1986.

On June 19, 2007, the Department issued Public Notice MT-07-10 stating its intention to issue (renewal and modification) the wastewater discharge permit for Montana Tunnels, Inc. The Department received two sets of written comments, one from the United States Environmental Protection Agency (EPA) and the other from the Center for Science in Public Participation (CSPP). During consideration of these comments, the Department determined that substantial questions were raised concerning the draft Permit and Statement of Basis. Therefore, the Department has revised the Statement of Basis and modified the draft permit to incorporate EPA's comments and is reopening the public comment period pursuant to ARM 17.30.1376.

II. Facility Information

A. Facility Description

The Montana Tunnels Mine, Inc operates is an open pit metal mine and flotation mill. The facility is located within sections 8, 9, 16 and 17 of Township 7 North, Range 4 West in Jefferson County. The facility employs a flotation mill process that uses cyanide in a separate closed circuit to produces silver, gold, and base metals concentrate from ore extracted from the mine pit.

The Outfall 001 structure consists of a spillway from the "Sedimentation Pond". The Sedimentation Pond is constructed within and across the Pen Yan Creek drainage. Above the Sedimentation Pond, Pen Yan Creek collects run-off and seepage (mine drainage) from disturbed areas within the mine site, reclaimed areas, waste rock piles and associated roads (Attachment 1).

Under normal operations, the entire flow of Pen Yan Creek is captured by the Sedimentation Pond (Attachment 1). The sedimentation pond was designed to contain

the runoff from a 10-year, 24-hour storm event (2.2 inches, 22 acre-ft) and to pass runoff from a 100-year, 24-hour event (3.4 inches, 136 acre-ft) over the spillway (Outfall 001). The total Sedimentation Pond storage capacity is 25 acre-ft (Montana Tunnels, 2008) and may be drained to the South Pond via the Stand Pipe. Twenty feet of freeboard exists between the Stand Pipe inlet elevation and the Outfall 001 inlet elevation. In addition to the storage capacity of the Sedimentation Pond, the Stand Pipe has the capacity to pass 1,100 gpm (2.4 cfs) with the sedimentation pond near empty and up to 1,300 (2.9 cfs) with the pond near capacity (Montana Tunnels, 2008). Additional design information is available in the permit file (administrative record, MT0028428).

The tailing facility seepage collection pond is called the "South Pond" (Attachment 1). All water in the South Pond is used as makeup water for the milling operations. A series of three parallel over-flow culverts extend from the South Pond to an area within Pen Yan Creek drainage below a historic railroad grade- wagon road embankment (Attachment 1). The three over-flow culverts constitute Outfall 002. Sources of wastewater to the South Pond include discharge from the Sedimentation Pond via the stand pipe, seepage collected from tailing facility under drain, run-off from the face of the tailing facility dam and pump-back from a monitoring/recovery well (Attachment 1).

In July of 2004, Montana Tunnels applied for a major amendment to its Operating Permit. The amendment includes a southerly expansion of the main waste rock dump, which would over-run the current Pen Yan Creek channel. The amendment proposal includes a realignment of Pen Yan Creek around the base of the expanded waste rock dump. The creek realignment would include an engineered channel that is 1,440 feet longer than the current channel configuration using native materials from Wood Chute Flats alluvium. The realigned channel would ultimately connect and empty into the Sedimentation Pond at the present location. (Montana Tunnels, 2006c)

B. Effluent Characteristics

Based on the information submitted by the applicant (flow line diagram and water balance) (Montana Tunnels, 2006b) wastewater discharged from Outfall 001 and 002 is commingled storm water and mine drainage (40 CFR Part Subchapter N).

The applicant provided an estimate of effluent quality for Outfall 001. This effluent characterization is based on water quality data gathered within Pen Yan Creek at monitoring station PY3, located up-gradient of the Sedimentation Pond. Flow in Pen Yan Creek above the Sedimentation Pond is ephemeral and does not reach the Sedimentation Pond under normal operation. Similarly, the Sedimentation Pond rarely contains standing water and discharge from Outfall 001 has not been reported.

Ultimately, the effluent quality for Outfall 001 is difficult to quantitatively predict under the precipitation or hydrologic conditions that would cause the Sedimentation Pond to discharge from the spillway. The analytical data for potential parameters of concern from the March 1996 sampling and that submitted on the application are summarized in Table 1.

Table 1: Estimated Effluent Characteristics for Outfalls 001 and 002.

Parameter	Location	Units	Previous Permit Limit	Minimum Value	Maximum Value	Average Value	Number of Samples
Flow, Daily Average	Outfall 001	mgd	(1)	0	0	0	NA
	Outfall 002	mgd	(1)	0	0	0	NA
pH	Outfall 001	s.u.	6 to 9/---(2)	7.23	8.13	7.54	6
	Outfall 002	s.u.	NA	7.3	8.6	7.89	19 ⁽³⁾
Specific Conductivity	Outfall 001	umhos/cm	(1)	251 ⁽⁴⁾	697	565	6
	Outfall 002	umhos/cm	NA	481	1110	758	19 ⁽³⁾
Total Hardness as CaCO ₃	Outfall 001	mg/L	(5)	266	340.2	310	5
	Outfall 002	mg/L	NA	198	506	361	18 ⁽³⁾
Alkalinity	Outfall 001	mg/L	(5)	---	---	---	0
	Outfall 002	mg/L	NA	53	130	100	19 ⁽³⁾
Oil and Grease	Outfall 001	mg/L	15/---(2)	---	---	---	0
	Outfall 002	mg/L	NA	---	---	---	0
Total Dissolved Solids	Outfall 001	mg/L	(5)	201 ⁽⁴⁾	201 ⁽⁴⁾	201 ⁽⁴⁾	1
	Outfall 002	mg/L	NA	335	852	598	19 ⁽³⁾
Total Suspended Solids (TSS)	Outfall 001	mg/L	30/20 ⁽²⁾	30	88 ⁽⁴⁾	53.3	3
	Outfall 002	mg/L	NA	---	---	---	0
Nitrate plus Nitrite as Nitrogen	Outfall 001	mg/L	(5)	<0.01	0.17	<0.05	4
	Outfall 002	mg/L	NA	0.03	0.68	0.33	19 ⁽³⁾
Total Cyanide	Outfall 001	mg/L	(5)	---	---	---	0
	Outfall 002	mg/L	NA	<0.005	<0.005	<0.005	8 ⁽⁶⁾
Total Recoverable Arsenic	Outfall 001	mg/L	0.29/---(2)	0.132 ⁽⁴⁾	0.835	0.491	4
	Outfall 002	mg/L	NA	<0.003	0.006	<0.0034	19
Total Recoverable Barium	Outfall 001	mg/L	(5)	---	---	---	0
	Outfall 002	mg/L	NA	0.027	0.057	0.038	8 ⁽⁶⁾
Total Recoverable Cadmium	Outfall 001	mg/L	0.004/---	0.0066 ⁽⁴⁾	0.0228	0.0132	4
	Outfall 002	mg/L	NA	<0.0001	0.0011	<0.0005	19
Total Recoverable Copper	Outfall 001	mg/L	0.01/---(2)	0.0151 ⁽⁴⁾	0.054	0.031	4
	Outfall 002	mg/L	NA	<0.001	0.061	<0.009	19 ⁽³⁾
Total Recoverable Iron	Outfall 001	mg/L	(6)	0.742	8.84	4.51	4
	Outfall 002	mg/L	NA	0.04	0.38	0.14	19 ⁽³⁾
Total Recoverable Lead	Outfall 001	mg/L	0.05/---(2)	0.018	0.035 ⁽⁴⁾	0.03	4
	Outfall 002	mg/L	NA	<0.003	0.009	<0.004	19 ⁽³⁾
Total Recoverable Manganese	Outfall 001	mg/L	(5)	0.257 ⁽⁴⁾	3.68	2.24	4
	Outfall 002	mg/L	NA	0.023	1.97	0.676	19 ⁽³⁾
Total Recoverable Zinc	Outfall 001	mg/L	0.12/---(2)	0.265 ⁽⁴⁾	7.05	3.63	4
	Outfall 002	mg/L	NA	0.01	0.26	0.08	19 ⁽³⁾

Footnotes:

- (1) No limit in previous permit; monitoring requirement only.
- (2) Instantaneous or Daily Maximum/30 day average.
- (3) All data points are from 2001 – 2005 dataset for South Pond.
- (4) Individual data point is from March 1996 analytical result from sample taken from Sedimentation Pond.
- (5) No monitoring or effluent limit in previous permit.
- (6) All data points are from 1996-1997 dataset for South Pond, dataset used when more recent data was not available.

The applicant also provided analytical data from the South Pond as a representative estimate of effluent quality for Outfall 002. Analytical data for potential parameters of concern for Outfall 002 are summarized in Table 1.

The permittee has not conducted WET monitoring for either Outfall.

C. Current Permit Limits and Compliance History

The current permit includes effluent limits for Outfall 001 for Total Suspended Solids (TSS), Oil and Grease (O&G), Arsenic, Cadmium, Copper, Lead, Zinc, pH and toxicity. TSS limits are technology-based, best practicable control technology (BPT), O&G limits are based on the water quality standard, and arsenic and metals limits are based on no additional degradation of background water quality that historically has not met surface water quality standards.

As discussed above in Section II.B., no discharge has been reported from Outfall 001 since inception of the permit in 1987. The department conducted compliance inspections at the facility on September 23, 1997, May 12, 2000, April 15, 2003, and October 26, 2005; no violations were documented. Neither the current nor previous permits have contained a compliance schedule.

This permit renewal and modification includes addition of Outfall 002 as a permitted discharge point. As this permitting action is the first time Outfall 002 has been included in MPDES permit MT0028428 no current or previous effluent limits or compliance schedules have been developed for this outfall

III. Rationale for Technology-Based Effluent Limits

The Montana Board of Environmental Review, at ARM 17.30.1207(1), has adopted by reference 40 CFR Subchapter N, which is a series of federal agency rules setting forth effluent limitations for existing point source dischargers and standards of performance for new point source dischargers discharging into state waters.

Montana Tunnels Mine extracts and mills gold, silver, lead and zinc ores. Discharges of wastewater from facilities within the copper, lead, zinc, gold, silver and molybdenum ore mining and dressing industrial subcategory are subject to the technology-based effluent limits (TBEL) at 40 CFR 440 Subpart J. These TBELs are based on best practicable control technology (BPT), best available technology (BAT), and the best available demonstrated technology (BADT), also called new source performance standards (NSPS). BPT and BAT are applicable to any existing facility and the BADT-NSPS are applicable to any new source.

A new source is defined as any building, structure, facility or installation from which there is or may be the discharge of pollutants, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under section 306 of the Clean Water Act (CWA) which will be applicable to such source if such standard is thereafter promulgated in accordance with section 306 of the Act (40

CFR 401.11(e), ARM 17.30.1304(37)(a)). Both BAT and BADT-NSPS were promulgated by EPA pursuant to section 306 of the CWA on December 3, 1982 (FR, Vol. 47, No. 233). Outfalls 001 and 002 were constructed in 1987; therefore, both outfalls are new sources and subject to NSPS effluent limit guidelines at 40 CFR 440.104. The NSPS at 40 CFR 440.104(a) allow discharge from these outfalls in accordance with the BADT effluent limits presented in Table 2.

Table 2: New Source Performance Standards Effluent Limit Guidelines			
Parameter	Units	Effluent Limitation	
		Maximum Daily Limit	Average Monthly Limit
pH	s.u.	6 to 9	6 to 9
Total Suspended Solids	mg/L	30	20
Total Recoverable Copper	mg/L	0.30	0.15
Total Recoverable Zinc	mg/L	1.5	0.75
Total Recoverable Lead	mg/L	0.6	0.3
Total Recoverable Mercury	mg/L	0.002	0.001
Total Recoverable Cadmium	mg/L	0.10	0.05

In addition to numeric ELGs in Table 2, NSPS at 40 CFR 440.104(b, c, and d) require there shall be no discharge of process wastewater to navigable waters from mills that use dump, heap, in-situ leach or vat-leach processes, cyanidation process, or froth-flotation process alone, or in conjunction with other processes. Therefore, the permit will include a narrative limitation prohibiting the discharge of process wastewater to state surface water.

The term *process waste water* is defined at 40 CFR 401.11(q) as any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product. This term does not include Mine Drainage as defined by the Category specific definitions applicable to the Ore Mining and Dressing Point Source Category (40 CFR 440). The definition of process wastewater, mine drainage and active mine area are incorporated into Part V of the permit.

There shall be no discharge of process wastewater to state surface waters.

IV. Rationale for Water Quality-Based Effluent Limits

Permits are required to include water quality-based effluent limits (WQBEL) when technology based effluent limits are not adequate to protect state water quality standards (40 CFR 122.44 and ARM 17.30.1344). ARM 17.30.637(2) states that no wastes may be discharged and no activities conducted such that the wastes or activities, will violate, or can reasonably be expected to violate, any of the standards. Montana water quality standards (ARM 17.30.601 *et seq.*) define both water use classifications for all state surface waters and numeric and narrative standards that protect those designated uses. New or increased sources, as defined in ARM 17.30.702(18), are subject to Montana Nondegradation Policy (75-5-303, MCA) and regulations (ARM 17.30.701 *et seq.*).

A. Receiving Water

The facility discharges to an tributary to Spring Creek (USGS, 1995) locally referred to as Pen Yan Creek. Pen Yan Creek enters Spring Gulch approximately ¼ mile downstream of Outfall 002. The receiving water is classified as B-1 according to Montana Water Use Classifications, ARM 17.30.610(1)(a).

Pen Yan Creek is located within the Upper Missouri watershed as identified by USGS Hydrological Unit Code (HUC) 10030101, and its impairment status has not been assessed and therefore is not listed on the 1996 or 2006 303d list. Spring Creek from Corbin Creek to the mouth (Segment MT41I006_080, 1.7 miles) was listed as impaired on the Montana 1996 303(d) list because of suspended solids, nutrients, metals, and pH. Aquatic life, coldwater fisheries, and drinking water beneficial uses were listed as impaired. The reach listed as impaired does not include the mine area. In 2002, aquatic life, coldwater fisheries, and drinking water supply beneficial uses were listed as impaired because of metals. Spring Creek did not appear on the 2004-303(d) list because of insufficient credible data and is not included in the 2006 303(d) list.

Spring Creek is a tributary to Prickly Pear Creek which is listed on the 2006 303d list as partially supporting agricultural uses and not supporting aquatic life, cold water fishery and drinking water uses. The EPA approved TMDL for the watershed are included in the “Framework Water Quality Restoration Plan and Total Maximum Daily Loads for the Lake Helena Planning Area – Volume II (MDEQ, 2006). Tables 12-2 through 12-6 of Appendix A of this document includes load allocations and waste load allocations (WLA) for Spring Creek for parameters arsenic, cadmium, copper, lead and zinc. A single WLA is given to all point sources and Montana Tunnels is listed in the appropriate tables as the only point source. Therefore, the entire WLA for each parameter is assigned to this facility.

B. Proposed WQBEL

1. Applicable Standards

The 1985 draft EIS adopted by the department on January 31, 1986 indicates the long term mean flow for Pen Yan Creek was estimated to be 0.4 cubic feet per second (cfs) (180 gpm). The applicant submitted a narrative characterization of Pen Yan Creek flows, based on 20 years of qualitative observations of Pen Yan Creek since 1986. Based on the Applicant’s summary of the quality and quantity of water within these stream segments observed (Montana Tunnels, 2006c) the receiving water at the points of discharge for Outfalls 001 and 002 is best described as ephemeral or dewatered.

ARM 17.30.637(6) states that ephemeral streams are not subject to the specific water quality standards of 17.30.620 through 17.30.629, but are subject to the treatment standards (ARM 17.30.635(2) and (3)) and the general prohibition of ARM 17.30.637.

The treatment standard at ARM 17.30.635(3) establishes that the degree of waste treatment required for discharges of industrial waste shall, at minimum, be treatment capable of achieving effluent quality equivalent to technology-based BPT effluent limit guidelines, as defined at 40 CFR Subchapter N (see discussion in Section III for definition of BPT).

Other applicable water quality standards at ARM 17.30.637(1) require that state surface waters must be free from substances attributable to municipal, industrial, agricultural practices or other discharges that will:

- Settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines;
- Create floating debris, scum, a visible oil film (or be present in concentrations at or in excess of 10 milligrams per liter) or globules of grease or other floating materials;
- Produce odors, colors or other conditions as to which create a nuisance or render undesirable tastes to fish flesh or make fish inedible;
- Create concentrations or combinations of materials which are toxic or harmful to human, animal, plant or aquatic life; or
- Create conditions which produce undesirable aquatic life.

For purposes of applying Montana Nondegradation Policy, at 75-5-303, MCA, the level of protection is prescribed in ARM 17.30.705(2), which states that existing and anticipated uses and the water quality necessary to protect those uses must be maintained and protected (Tier1).

2. Proposed Limits

Outfall 001

As previously discussed, Outfall 001 discharge only as a result of precipitation in the drainage which exceeds the 10-year, 24-hour event (2.2 inches) and the facility has not reported a discharge from this Outfall since the pond was constructed. The drainage way is blocked a short distance below the pond by the embankment associated with a historic railway and road. This block restricts any flow in the drainage from reaching state surface water below this structure. Therefore, the department is not proposing numeric WQBEL for Outfall 001 at this time. The permittee will be required to monitoring the quality and volume of the effluent discharged from Outfall 001. The department may reopen the permit if monitoring results indicates WQBEL are necessary.

The general prohibition of ARM 17.30.637(1) are included in the permit for Outfall 001 (listed in previous section).

Outfall 002

As discussed in Section IV.A, this facility has been assigned a waste load allocation (WLA) as part of the Lake Helena watershed TMDL. Outfall 002 discharges below the historic railroad grade/wagon road embankment and therefore, discharges from Outfall 002 may contribute to down gradient surface water flow and over-all directly discharged pollutant load of the basin. Accordingly, the TMDL WLAs are included in the permit as annual load limits (Table 3).

Table 3. TMDL WLA for Permit # MT0028428.		
Parameter	Units	Total Annual Load
Total Recoverable Arsenic	lbs/yr	82.1
Total Recoverable Copper	lbs/yr	77.6
Total Recoverable Zinc	lbs/yr	1770
Total Recoverable Lead	lbs/yr	51.1
Total Recoverable Cadmium	lbs/yr	4.1

Discharges from Outfall 002 at levels specified in the WLA-TMDL as pounds per year may result in violation of both chronic and acute water quality standards in the immediate receiving waters (Penn Yan and Spring Creeks) if a discharge occurs. In addition to precipitation induced discharges, the facility may discharge from Outfall 002 due to the decreased volume of the South Pond as a result of encroachment of the tailing pond embankment or during reclamation, as demand for make-up water at the mill decreases. Therefore, WQBEL are proposed for Outfall 002.

WQBEL for parameters arsenic, copper, zinc, lead and cadmium are based on methods described by EPA's (1991) Technical Support Document for Toxics Control and effluent quality data and other information in the permit application. (See Attachment 2) Table 4 summarizes the proposed effluent limits for these parameters. Arsenic and lead limits are based on human health standard and copper cadmium and zinc limits are based on chronic aquatic life standards.

Outfall 001 and 002

The instantaneous maximum limitation for oil & grease in any grab sample shall not exceed 10 mg/L.

There shall be no discharge which causes visible oil sheen in the receiving stream.

There shall be no acute toxicity in the effluent discharged by the facility.

There shall be no discharge that settles to form an objectionable sludge deposit or emulsion beneath the surface of the water or upon adjoining shorelines.

Table 4: Water Quality Based Effluent Limits for Outfalls 002.			
Parameter	Units	Effluent Limitation	
		Maximum Daily Limit	Average Monthly Limit
Total Recoverable Arsenic	mg/L	0.013	0.010
Total Recoverable Copper	mg/L	0.046	0.028
Total Recoverable Zinc	mg/L	0.36	0.21
Total Recoverable Lead	mg/L	0.023	0.015
Total Recoverable Cadmium	mg/L	0.001	0.0007

V. Final Effluent Limits

Outfall 001

The proposed final effluent limits are a combination of the more stringent of the technology-based and water quality based effluent limits as developed in Section III and IV. Proposed numeric effluent limits for Outfall 001 are summarized in Table 5 and consist of the NSPS TBEL.

Table 5: Proposed Effluent Limits for Outfall 001			
Parameter	Units	Effluent Limitation	
		Maximum Daily Limit	Average Monthly Limit
Total Suspended Solids	mg/L	30	20
Total Recoverable Copper	mg/L	0.30	0.15
Total Recoverable Zinc	mg/L	1.5	0.75
Total Recoverable Lead	mg/L	0.6	0.3
Total Recoverable Mercury	mg/L	0.002	0.001
Total Recoverable Cadmium	mg/L	0.10	0.05

Outfall 002

The proposed numeric effluent limits applicable to discharges from Outfall 002 are a combination of the TBEL NSPS from Table 2, the TMDL WLAs in Table 3, and the WQBEL in Table 4. Numeric effluent limits for Outfall 002 are summarized in Table 6.

Table 6. Proposed Effluent Limits for Outfall 002.			
Parameter	Effluent Limitation		
	Daily Maximum Limit	Average Monthly Limit	Annual Load Limit
Total Suspended Solids	30 mg/L	20 mg/L	NA
Total Recoverable Arsenic	0.013 mg/L	0.010 mg/L	82.1lbs/yr
Total Recoverable Cadmium	0.001 mg/L	0.0007 mg/L	4.1 lbs/yr
Total Recoverable Copper	0.046 mg/L	0.028 mg/L	77.6 lbs/yr
Total Recoverable Lead	0.023 mg/L	0.015 mg/L	51.1 lbs/yr
Total Recoverable Mercury	0.002 mg/L	0.001 mg/L	NA
Total Recoverable Zinc	0.36 mg/L	0.21 mg/L	1770 lbs/yr

Outfalls 001 and 002

Effluent pH shall remain between 6.0 and 9.0 standard units. For compliance purposes, any single analysis and/or measurement beyond this limitation shall be considered a violation of the conditions of this permit.

There shall be no discharge of process wastewater to state surface waters.

The instantaneous maximum limitation for oil & grease in any grab sample shall not exceed 10 mg/L.

There shall be no discharge which causes visible oil sheen in the receiving stream.

There shall be no acute toxicity in the effluent discharged by the facility.

There shall be no discharge that settles to form an objectionable sludge deposit or emulsion beneath the surface of the water or upon adjoining shorelines.

VI. Monitoring Requirements

A. Effluent Monitoring

The permittee shall sample the effluent from the Sedimentation Pond Spillway outlet (Outfall 001) prior to entering Pen Yan Creek; the effluent from the South Pond (Outfall 002) must be sampled at or near the culverts, prior to mixing with the receiving water. As a condition of the permit, the permittee shall identify the monitoring location and methodology for both effluent quality and volume (flow), see Special Conditions.

Annually, the permittee shall report total annual loads (in lbs/yr) discharged from Outfall 002 for all monitored parameters (Table 8) except mercury, selenium, thallium, pH, Flow, TSS, Oil and Grease, and Total Hardness.

Table 7. Outfall 001 Effluent Monitoring Requirements				
Parameter	Unit	Sample Frequency	Sample Type ¹	RRV
Flow Duration	days	Daily	NA	NA
Total Suspended Solids	mg/L	Daily	Grab	10
Oil and Grease	mg/L	Daily	Grab	1
pH	s.u.	Daily	Grab	0.1
Total Hardness as CaCO ₃	mg/L	Daily	Grab	NA
Nitrate + Nitrite as Nitrogen	mg/L	Daily	Grab	0.01
Total Recoverable Arsenic	mg/L	Daily	Grab	0.003
Total Recoverable Cadmium	mg/L	Daily	Grab	0.00008
Total Recoverable Copper	mg/L	Daily	Grab	0.001
Total Recoverable Lead	mg/L	Daily	Grab	0.0005
Total Recoverable Mercury	mg/L	Monthly	Grab	0.00001
Total Recoverable Selenium	mg/L	Monthly	Grab	0.001
Total Recoverable Thallium	mg/L	Monthly	Grab	0.0002
Total Recoverable Zinc	mg/L	Daily	Grab	0.01
Footnotes:				
1. See Definitions section at end of permit for explanation of terms.				

The monitoring frequency for Outfall 001 is daily because discharges from this outfall are expected to be of short duration and associated with wet weather type events. In addition to parameters with effluent limits, the permittee is required to monitor, total hardness, mercury, selenium, and thallium.

The monitoring frequency for Outfall 002 is weekly because discharge may be of extended duration. In addition to monitoring for constituents with effluent limits, monitoring is required for (1) total hardness to calculate applicable standards for hardness-dependent metals, (2) nitrogen compounds, because nitrogen is a nutrient of concern in the basin, (3) cyanide monitoring is required due to its use in the milling process, (4) selenium and thallium monitoring is required because the presence and/or

concentration of these parameters has not been quantified in the permit application materials.

Table 8. Outfall 002 Effluent Monitoring Requirements				
Parameter	Unit	Sample Frequency	Sample Type ¹	RRV
Flow	gpd	Continuous	Total	NA
Flow Duration	days	Daily	NA	NA
Total Suspended Solids	mg/L	Weekly	Grab	10
Oil and Grease	mg/L	Weekly	Grab	1
pH	s.u.	Weekly	Instantaneous	0.1
Total Hardness as CaCO ₃	mg/L	Weekly	Grab	NA
Nitrate + Nitrite as Nitrogen	mg/L	Weekly	Grab	0.01
Kjeldahl Nitrogen, Total	mg/L	Weekly	Grab	0.1
Total Cyanide	mg/L	Weekly	Grab	0.005
Total Recoverable Arsenic	mg/L	Weekly	Composite	0.003
	lbs/day		Calculated	NA
Total Recoverable Cadmium	mg/L	Weekly	Composite	0.00008
	lbs/day		Calculated	NA
Total Recoverable Copper	mg/L	Weekly	Composite	0.001
	lbs/day		Calculated	NA
Total Recoverable Lead	mg/L	Weekly	Composite	0.0005
	lbs/day		Calculated	NA
Total Recoverable Mercury	mg/L	Monthly	Grab	0.00001
Total Recoverable Selenium	mg/L	Monthly	Grab	0.001
Total Recoverable Thallium	mg/L	Monthly	Grab	0.0002
Total Recoverable Zinc	mg/L	Weekly	Composite	0.01
	lbs/day		Calculated	NA
Footnotes:				
1. See Definitions section at end of permit for explanation of terms.				

The total annual load (L_a) in lbs/yr from Outfall 002 is computed and reported as the sum of weekly loads (L_w) discharged during the calendar year as represented by the following equation:

$$L_a = \sum_{i=1}^{52} L_w$$

Where L_w is computed using the following equation.

$$L_w = L_d \times D$$

Where D is the number of days of discharge occurred during the week and L_d is the daily load in lbs/day as computed by the following:

$$L_d = C_d \times Q_d \times 8.34$$

Where:

- C_d is the daily concentration in mg/L,
- Q_d is daily flow in million gallons per day, and
- 8.34 is a conversion factor.

B. Whole Effluent Toxicity (WET) Requirements

WET testing is not necessary due to the inclusion in the permit of numeric WQBEL for major toxicants in the effluent, primarily metal and cyanide.

C. Special Condition

The permittee shall develop and implement Effluent Monitoring Plan. The Effluent Monitoring Plan shall include a description of how and where sample and flow (duration and volume) will be collected or monitored for Outfalls 001 and 002. The plan shall include, but is not limited to sample collection and handling, plans, specifications and an installation schedule for flow monitoring or other automated equipment, apparatus or instrumentation. The plan must address and demonstrate compliance with the monitoring, recording and reporting requirement in Part II the permit, and describe how and when a discharge shall occur. The permit must clearly identify the location and permanently delineate the physical location where samples are collected and flow monitored or assessed for the purposes of compliance with permit. The Plan must be signed and certified in accordance with Part IV.G of the permit. The permittee must keep a copy of the plan on site at all times.

The department is requiring this Plan as a special condition of the permit because of the intermittent nature of the discharge and lack of sample or flow collection equipment.

i) Authority: ARM 17.30.1342(10) – Samples and measurements must be representative of the monitored activity; and, 75-5-602, MCA – The department may require the owner/operator of any point source to install, use and maintain monitoring equipment; sample effluents using specified monitoring equipment at designated locations and intervals, and to provide this information as may be reasonably required by the Department.

ii) Schedule: By DATE, (to be completed upon issuance of the final permit), the permittee shall implement the plan within six months after the effective date of the permit.

VII. Nonsignificance Determination

The department has determined pursuant to 75-5-303, MCA that the proposed action will not result in degradation of water quality because existing uses are protected in accordance with ARM 17.30.705(2)(a).

VIII. Other Information

On September 21, 2000, a U.S. District Judge issued an order stating that until all necessary total maximum daily loads (TMDLs) under Section 303(d) of the Clean Water Act are established for a particular water quality limited segment (WQLS), the State is not to issue any new permits or increase permitted discharges under the MPDES program. The order was issued in the lawsuit Friends of the Wild Swan v. U.S. EPA. et al., CV 97-35-M-DWM, District of Montana, Missoula Division. The DEQ finds that the issuance of this permit does not conflict with the order, because: the proposed permit incorporates the waste load allocations assigned to the facility based on EPA approved TMDL, and all necessary TMDL have been completed.

IX. Information Source

Administrative Rules of Montana, 17.30.601 *et seq.*, “*Montana Surface Water Quality Standards and Procedures*”, June 30, 2004.

Administrative Rules of Montana, 17.30.701 *et seq.*, “*Nondegradation of Water Quality*”, June 30, 2004.

Administrative Rules of Montana, 17.30.1201 *et seq.* and 17.30.1301 *et seq.*, “*Montana Pollutant Discharge Elimination System*”, March 31, 2006

Code of Federal Register, Title 40, Chapter I, “*Environmental Protection Agency*”, Subchapter D and N, 2006.

EPA, Correspondence from Dana Allen, “*RE: NPDES Permit Writing Guidance for Mines*”, w/ enclosures, May 21, 1993.

EPA, “*Technical Support Document for Water Quality-based Toxics Control*”, EPA/505/2-90-001, PB91-127415, March 1991.

Montana Tunnels, 2008, “*Sedimentation Pond Specifications*”, received by Facsimile February 13, 2008, on-file at the department in Permit Renewal Administrative Record.

Montana Tunnels, 2006b “*RE: Deficiency response for Montana Pollutant Discharge Elimination System (MPDES) Permit #MT0028428 Renewal/Modification Application*”, Correspondence dated March 16, 2006, on-file at the department in Permit Renewal Administrative Record

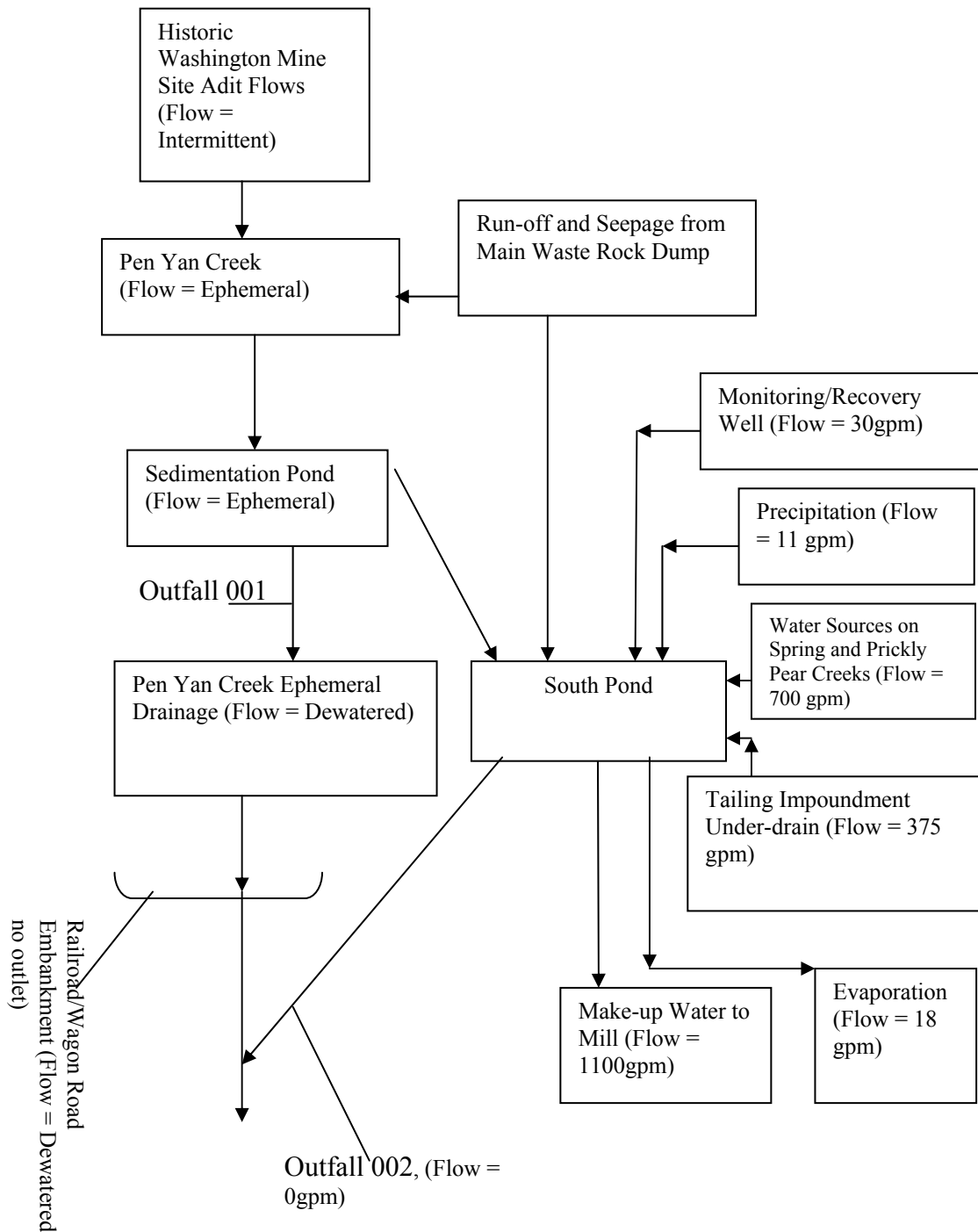
Montana Tunnels, 2006c, “*RE: Second deficiency response for Montana Pollutant Discharge Elimination Sytem (MPDES) Permit #MT0028428 Renewal/Modification Application*”, Correspondence date June 14, 2006, on-file at the department in Permit Renewal Administrative Record

Montana Code Annotated, Title 75-5-101 *et seq.*, “*Montana Water Quality Act*”, 2003

Schaefer, John, Environmental Manager Montana Tunnels, Inc., personal communication, January 3, 2007.

United States Geologic Survey, 7.5 Minute Quadrangle Series, “*Wickes*” Montana, 1995

Attachment 1: Water Balance and Flow Line Diagram During Operations.



Attachment 2: Water Quality Based Permit Limit Derivations.

Parameter:	Arsenic
Restriction:	Annual
Facility:	Montana Tunnels Mine
Permit Number:	MT0028428
Receiving Water:	Unnamed Trib to Spring Creek
Date:	January 3 2008

Condition		%	Chronic	Acute	Other
Human Health	mg/L				0.01
Aquatic Life	mg/L		0.15	0.34	
ACR				2.3	
Mixing Zone	Not Applicable				
7Q10	cfs				
Chronic MZ	cfs				
Acute MZ	cfs				
Human Health	cfs				
Effluent Flow	cfs				
Water Quality Std.	mg/L		0.1500	0.3400	0.0100
Background Conc.	mg/L		NA	NA	NA
Wasteload Allocation (from mass balance)					
WLA _c	mg/L		0.1500		
WLA _a	mg/L			0.3400	
WLA(hh)	mg/L				0.0100
Long-Term Average -Calc.					
Coeff. Variation (CV)	na	0.245			
Percentile	%	99			
LTA _c , multiplier Table 5-1			0.76		
LTA _a , multiplier Table 5-1				0.59	
LTA _c	mg/L		0.1134		
LTA _a	mg/L			0.1989	
LTA=min(LTA _c , LTA _a)	mg/L		0.1134	0.1134	
Sample Size			4	NA	4
AML, multiplier Table 5-2			1.32		
MDL, multiplier Table 5-2				1.73	
MDL/AML mult., Table 5-3					1.30682

		AML	MDL
Final Effluent Limit, AL	mg/L	0.14969	0.19562
Final Effluent Limit, HH	mg/L	0.01000	0.01307

Comment: Monitoring frequency is weekly.

Parameter: Cadmium
Restriction: Annual
Facility: Montana Tunnels Mine
Permit Number: MT0028428
Receiving Water: Unnamed Trib to Spring Creek
Date: January 3 2008

Condition		%	Chronic	Acute	Other
Human Health	mg/L				0.005
Aquatic Life	mg/L		0.0007	0.00787	
ACR				11.2	
Mixing Zone	Not Applicable				
7Q10	cfs				
Chronic MZ	cfs				
Acute MZ	cfs				
Human Health	cfs				
Effluent Flow	cfs		0.81	0.81	0.81
Water Quality Std.	mg/L		0.0007	0.0079	0.0050
Background Conc.	mg/L				
Wasteload Allocation (from mass balance)					
WLA _c	mg/L		0.0007		
WLA _a	mg/L			0.0079	
WLA(hh)	mg/L				0.005
Long-Term Average -Calc.					
Coeff. Variation (CV)	na	0.396			
Percentile	%	99			
LTA _c , multiplier Table 5-1			0.64		
LTA _a , multiplier Table 5-1				0.44	
LTA _c	mg/L		0.0005		
LTA _a	mg/L			0.0035	
LTA=min(LTA _c , LTA _a)	mg/L		0.0005	0.0005	
Sample Size			4	NA	4
AML, multiplier Table 5-2			1.55		
MDL, multiplier Table 5-2				2.27	
MDL/AML mult., Table 5-3					1.46452

		AML	MDL
Final Effluent Limit, AL	mg/L	0.00070	0.00102
Final Effluent Limit, HH	mg/L	0.00500	0.00732

Comment: Monitoring frequency is weekly.

Parameter: Copper
 Restriction: Annual
 Facility: Montana Tunnels Mine
 Permit Number: MT0028428
 Receiving Water: Unnamed Trib to Spring Creek
 Date: January 9 2008

Condition		%	Chronic	Acute	Other
Human Health	mg/L				1.3
Aquatic Life	mg/L		0.02794	0.04692	
ACR				1.7	
Mixing Zone	Not Applicable				
7Q10	cfs				
Chronic MZ	cfs				
Acute MZ	cfs				
Human Health	cfs				
Effluent Flow	cfs		0.81	0.81	0.81
Water Quality Std.	mg/L		0.0279	0.0469	1.3000
Background Conc.	mg/L				
Wasteload Allocation (from mass balance)					
WLA _c	mg/L		0.0279		
WLA _a	mg/L			0.0469	
WLA(hh)	mg/L				1.3
Long-Term Average -Calc.					
Coeff. Variation (CV)	na	2.542			
Percentile	%	99			
LTA _c , multiplier Table 5-1			0.17		
LTA _a , multiplier Table 5-1				0.10	
LTA _c	mg/L		0.0046		
LTA _a	mg/L			0.0047	
LTA=min(LTA _c , LTA _a)	mg/L		0.0046	0.0046	
Sample Size			4	NA	4
AML, multiplier Table 5-2			6.04958		
MDL, multiplier Table 5-2				9.90072	
MDL/AML mult., Table 5-3					1.6366

		AML	MDL
Final Effluent Limit, AL	mg/L	0.02794	0.04573
Final Effluent Limit, HH	mg/L	1.30000	2.12758

Comment: Monitoring frequency is weekly.

Parameter:	Lead
Restriction:	Annual
Facility:	Montana Tunnels Mine
Permit Number:	MT0028428
Receiving Water:	Unnamed Trib to Spring Creek
Date:	January 9 2008

Condition		%	Chronic	Acute	Other
Human Health	mg/L				0.015
Aquatic Life	mg/L		0.01631	0.41844	
ACR				25.7	
Mixing Zone	Not Applicable				
7Q10	cfs				
Chronic MZ	cfs				
Acute MZ	cfs				
Human Health	cfs				
Effluent Flow	cfs		0.81	0.81	0.81
Water Quality Std.	mg/L		0.0163	0.4184	0.0150
Background Conc.	mg/L				
Wasteload Allocation (from mass balance)					
WLA _c	mg/L		0.0163		
WLA _a	mg/L			0.4184	
WLA(hh)	mg/L				0.015
Long-Term Average -Calc.					
Coeff. Variation (CV)	na	0.51			
Percentile	%	99			
LTA _c , multiplier Table 5-1			0.58		
LTA _a , multiplier Table 5-1				0.37	
LTA _c	mg/L		0.0094		
LTA _a	mg/L			0.1535	
LTA=min(LTA _c , LTA _a)	mg/L		0.0094	0.0094	
Sample Size			4	NA	4
AML, multiplier Table 5-2			1.73727		
MDL, multiplier Table 5-2				2.7259	
MDL/AML mult., Table 5-3					1.56907

		AML	MDL
Final Effluent Limit, AL	mg/L	0.01631	0.02559
Final Effluent Limit, HH	mg/L	0.01500	0.02354

Comment: Monitoring frequency is weekly.

Parameter: Zinc
Restriction: Annual
Facility: Montana Tunnels Mine
Permit Number: MT0028428
Receiving Water: Unnamed Trib to Spring Creek
Date: January 9 2008

Condition		%	Chronic	Acute	Other
Human Health	mg/L				2.00
Aquatic Life	mg/L		0.36	0.36	
ACR				1.0	
Mixing Zone	Not Applicable				
7Q10	cfs				
Chronic MZ	cfs				
Acute MZ	cfs				
Human Health	cfs				
Effluent Flow	cfs		0.81	0.81	0.81
Water Quality Std.	mg/L		0.3555	0.3555	2.0000
Background Conc.	mg/L				
Wasteload Allocation (from mass balance)					
WLA _c	mg/L		0.3555		
WLA _a	mg/L			0.3555	
WLA(hh)	mg/L				2
Long-Term Average -Calc.					
Coeff. Variation (CV)	na	0.657			
Percentile	%	99			
LTA _c , multiplier Table 5-1			0.50		
LTA _a , multiplier Table 5-1				0.30	
LTA _c	mg/L		0.1777		
LTA _a	mg/L			0.1056	
LTA=min(LTA _c , LTA _a)	mg/L		0.1056	0.1056	
Sample Size			4	NA	4
AML, multiplier Table 5-2			2.00		
MDL, multiplier Table 5-2				3.37	
MDL/AML mult., Table 5-3					1.68

		AML	MDL
Final Effluent Limit, AL	mg/L	0.21	0.36
Final Effluent Limit, HH	mg/L	2.00	3.37

Comment: Monitoring frequency is weekly.

Attachment 3: Public Participation

Montana Tunnels, Inc., MPDES Permit renewal – Response to Public Comment

On June 19, 2007, the Department issued Public Notice MT-07-10 presenting a tentative decision to issue a wastewater discharge permit renewal and modification to Montana Tunnels, Inc. The public notice stated that the Department had prepared a draft Permit and Statement of Basis and that it was available for public review and comment. The notice required that all comments received or postmarked by July 18, 2007 would be considered in formulation of a final determination and issuance of the permit.

The Department received two sets of written comments, one from the United States Environmental Protection Agency (EPA) and the other from the Center for Science in Public Participation (CSPP). During consideration of the submitted comments for final permit development the Department determined that substantial questions were raised concerning the draft Permit and Statement of Basis. Therefore, the Department has prepared a revised Statement of Basis and draft Permit and reopening of the comment period pursuant to ARM 17.30.1376. Specific comments received in reaction to Public Notice MT-07-10 and responses to those comments prepared pursuant to ARM 17.30.1377 are as follows.

1. Comment: According to Table 1 in the Statement of Basis, the previous permit limit for total recoverable arsenic for Outfall 001 was 0.29 mg/L daily maximum. A memo, dated March 21, 2007, from George Matheius to Bonnie Lovelace and Tom Reid, and copied to EPA, discusses the implementation of the wasteload allocations presented in the final TMDL for the Lake Helena Watershed Planning Area. This memo states that based on modeling, if a discharge were to occur, the arsenic standards would be exceeded in Prickly Pear Creek and that a 60 % reduction in Montana Tunnel's arsenic load is required to meet the 10ug/L water quality standard for Prickly Pear Creek. The draft permit has eliminated the 0.29 mg/L arsenic limit and does not contain any limit for arsenic. The draft permit should contain an arsenic limit which meets the wasteload allocation established in the approved TMDL for the Lake Helena Watershed Planning Area. (EPA)

Response: The draft permit has been modified to include the waste load allocation (WLA) for the facility as given in "Framework Water Quality Restoration Plan and Total Maximum Daily Loads for the Lake Helena Planning Area – Volume II (TMDL) (EPA, 2006). Tables 12-2 through 12-6 in Appendix A identified load allocations and WLAs for Spring Creek for arsenic, cadmium, copper, lead and zinc. A single WLA was given to all point sources and Montana Tunnels is listed as the only point source. Therefore, the entire WLA is assigned to this facility. The WLA for Permit MT0028428 is summarized below and discussed in the revised statement of basis (SOB). The appropriate monitoring and reporting requirements have also been included in Section VI of the revised SOB and added to Part I.C. of the revised draft Permit.

Incorporation of the TMDL, as written, in the form of total annual load limits, may inherently constitute reasonable potential for the discharge to cause or contribute to an exceedance of a water quality standard in the receiving water, therefore water quality based effluent limits have also been included in the revised draft permit.

This comment and its response introduce information not previously considered or stated within the analysis completed to support the tentative decision to renew and modify Permit MT0028428. Consideration of this information has resulted in the Department's decision to prepare a revised Statement of Basis and a revised draft Permit. Therefore, in accordance with ARM 17.30.1376 the public comment period has been re-opened. Because EPA does not provided the permitting authority with notice of approved TMDLs there is no formal process for incorporating approved WLA into permits. Because this information was not included in the administrative record for the permit development it was not considered in formulation of the permit limits. The March 21, 2007 memorandum does not constitute a wasteload allocation or serve a formal basis for developing permit limits.

Parameter	Units	Total Annual Load
Total Recoverable Arsenic	lbs/yr	82.1
Total Recoverable Copper	lbs/yr	77.6
Total Recoverable Zinc	lbs/yr	1770
Total Recoverable Lead	lbs/yr	51.1
Total Recoverable Cadmium	lbs/yr	4.1

2. Comment: The draft permit includes Outfall 002 which consists of three overflow culverts from the South Pond. Based on information in the Statement of Basis, Outfall 002 was apparently not previously permitted. Please clarify in the Statement of Basis the previous regulatory status of this outfall. Please also include any information about previous discharges from Outfall 002. (EPA)

Response: Outfall 002 was not identified in previous permit application and consequently was not included in the current effective permit for the facility. Upon issuance of the proposed permit, Outfall 002 will be authorized to discharge for the first time. As described in Section III of the Statement of Basis, both Outfalls 001 and 002 were constructed in 1987. Outfall 002 was first document by the Department during a 2006 compliance evaluation inspection conducted at the facility. Additional language has been added to the Statement of Basis clarifying the status of this outfall.

3. Comment: Section II.A. of the Statement of Basis states that sources of wastewater to the South Pond include discharge from the Sedimentation Pond include discharge from the tailing facility under drain, run-off from the face of tailing facility dam and pump-back from a monitoring/recovery well. Section IV.B.2. refers to potential discharges from Outfall 002 as a result of mill and/or tailing impoundment drain-down. Please clarify whether or not the South Pond potentially receives discharges from the mill. (EPA)

Response: The tailing impoundment was constructed across and within the profile of the pre-mining drainage channel. It is possible that seepage from the tailing impoundment is a component of the water flowing from the underdrain to the South Pond; however, no water quality parameters specific to process water, such as cyanide, have been detected in the South Pond based on the data submitted with the permit renewal application. Primary flow components to the underdrain are believed to be dominated by the equivalent to the pre-mining base flow and/or alluvial ground water flow within the drainage that was transected by construction of the tailing storage facility.

As discussed in Section IV.B.1. of the Statement of Basis the mine and mill facility currently operate under environmental conditions that result in a net negative water balance. Therefore, the facility employs make-up water pumping and recycling water management activities for existing water associated within the facility; as well as, captures additional available sources of water for the mill operations. The occurrence of a discharge from Outfall 002 as part of a mill drain-down as referred to in the Statement of Basis is not believed to be related to a discharge of mill process water from the South Pond, but rather a results of cessation of make-up water pumping from the South Pond to the mill during an extended shut down period. This lack of pumping from the South Pond combined with semi continuous flow from the underdrain would likely cause water levels in the pond to overtop the culvert's outlet invert elevation and discharge from Outfall 002. Upon issuance of the permit, the discharge of process wastewater will be prohibited.

4. Comment: 40 CFR 104(d)(1) states that there shall be no discharge of process wastewater from mills that use the cyanidation process to extract gold or silver unless the conditions and requirements of 104(d)(2) are met. A permit condition should be added which includes the requirements of 40 CFR 104(d). (EPA)

Response: The applicant has not proposed discharge of process wastewater from either Outfall 001 or 002. As discussed in the first paragraph of Section II. A. of the Statement of Basis, Sections III and VII of the submitted renewal application Form 2D certify that the cyanide ore beneficiation circuit is a closed circuit that does not contribute wastewater to permitted discharges from the proposed Outfalls. Cyanide monitoring in the South Pond is required by the facilities operating permit and is required in the draft permit, cyanide has not been detected in the South Pond.

5. Comment: Section VIII. of the Statement of Basis states that the issuance of the Permit does not conflict with the TMDL order because: 1) the proposed discharge is not a new or increased source, and 2) the receiving water body is not on the 1996 or 2006 303(d) list as impaired. According to the Statement of Basis, the receiving water, Pen Yan Creek flows into Silver Creek one-quarter mile downstream from Outfall 002. Silver Creek in turn flows into Prickly Pear Creek. Prickly Pear Creek is impaired for arsenic and metals. A wasteload allocation for arsenic has been assigned to Montana Tunnels as part of the Lake Helena final TMDL. This section should be revised to include the wasteload allocation. (EPA)

Response: As discussed in Section IV.A. of the Statement of Basis, the receiving water for Outfalls 001 and 002 is Pen Yan Creek. Flow in Pen Yan Creek discharges into Spring Creek, which confluences with Prickly Pear Creek miles down gradient. See Response to Comment 1 above.

6. Comment: Monitoring Requirements: The effluent monitoring requirements in the permit do not include a requirement for measuring flow if a discharge occurs. A requirement to monitor flow from both outfalls when discharges occur should be included in the permit. (EPA)

Response: Flow monitoring requirements have been developed in the revised Statement of Basis and included in Part I.C. of the revised draft Permit. Additionally, a compliance schedule has been added (Part I.D.) to the revised draft Permit for development and implementation of a flow

monitoring plan, methods and instrumentation. The flow monitoring and reporting criteria added will ensure compliance TMDL load based limits implemented in the permit. The following compliance schedule language regarding flow monitoring has been included in the revised draft Permit.

“The permittee shall submit a Flow Monitoring Plan for Department approval including plans, specifications and an installation schedule for flow monitoring apparatus or instrumentation. The Flow Monitoring Plan shall be submitted no later than 120 days from the effective date of this permit. The proposed flow monitoring system(s) must be capable of providing flow monitoring data that is necessary to demonstrate compliance with total annual wasteload allocations. Flow monitoring system(s) shall be capable of measuring, recording and reporting flow in accordance with Part II. B. of the permit.”

7. Comment: The Montana Department of Environmental Quality (MDEQ) is proposing to authorize discharges from the Montana Tunnels mine into Pen Yan Creek at limits established by USEPA under the New Source Performance Standards. The New Source Performance Standards are not protective of aquatic life or human health (for arsenic) for the metals listed in the permit numeric discharge limits. Pen Yan Creek flow into Spring Creek, a receiving water classified as B-1 according to Montana Water Use Classifications, ARM 17.30.610 (1)(a), approximately ¼ mile below the mine discharge point. There is no flow information presented on Spring Creek in the EA or Statement of Basis.

MDEQ is apparently using the required Whole Effluent Toxicity testing from the permit to protect aquatic resources in Spring Creek, but the requirement MDEQ has proposed for testing are:

“The permittee shall conduct an acute 48-hour static renewal toxicity test using *Ceriodaphnia sp.* and an acute 96-hour static renewal toxicity test using flathead minnows (*Pimephales promelas*) as the alternating species.” (Draft Permit, p.5 of 22)

Acute testing will not detect potential chronic effects to aquatic life, and will not be protective of aquatic life or human health in Spring Creek.

In addition, MDEQ has reserved the right to change the testing requirements without public input or notice:

“If the results for four consecutive quarters of testing indicate no acute toxicity, the permittee may request a reduction to quarterly acute toxicity testing on only one species on an alternating basis. The Department may approve or deny the request based on the results and other available information without an additional public notice.” (Draft Permit, p.6 of 22)

Lacking a more thorough analysis of the potential impacts of mine discharge at the relatively unprotective limits set by the New Source Performance Standards, which were not established on the basis of the protection of aquatic life or human health, MDEQ should either establish permit limits that are protective of aquatic life and human health in Spring Creek, or require Whole Effluent Testing that would verify chronic, as opposed to acute, toxicity in the discharge. (CSPP)

Response: See Part IV of the Statement of Basis for a discussion of the applicable water quality standards that apply to the point source discharges in the permit. Because of the ephemeral and dewatered nature of the first receiving water aquatic life is not a protected beneficial use in Pen Yan Creek. The revised Statement of Basis and draft Permit develop and include effluent limitation based on chronic aquatic life and human health standards.

The reduction in monitoring language quoted above from page 6 of the draft permit has been removed from the revised draft permit.